SECTION 7. 327 IAC 8-13-7 IS ADDED TO READ AS FOLLOWS:

327 IAC 8-13-7 Distribution System

Authority: IC 13-13-5-1; IC 13-13-5-2; IC13-18-3-2; IC 13-18-11-13; IC 13-18-16-9
Affected: IC 13-14-1-13; IC 13-14-8; IC 13-18-11-2

Sec. 7. (a) Distribution system pressure requirements are as follows:

(1) Distribution systems shall be designed to maintain pressures. The system shall be designed and operated to maintain a minimum residual pressure of 20 psi at ground level at all points in the distribution system under all conditions of flow. The normal static pressure in the distribution system shall be no less than 35 psi at ground level.

(2) Pipe shall meet provisions of the AWWA Standards

(3) Water mains shall be sized to deliver the required quantity of water at adequate pressure including fire flow where applicable.

(4) The system shall be designed to meet existing demands on the distribution system. Future distribution system demands shall be taken into account.

(A) The minimum size water main shall be 4 inch nominal diameter in distribution systems serving incorporated areas, subdivisions or other closely situated housing or commercial units.

(B) The minimum size water main shall be 3 inch nominal diameter in distribution systems serving rural areas where service connections are widely spaced, water usage per service is low and rates of flow are slow.

(b) Water mains and water service lines shall be protected from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains as follows:

(1) By following water main guidelines for Horizontal Separation which include the following:

(A) Water mains shall be laid at least ten feet horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service connection.

(B) Water mains may be laid closer than ten feet to a sewer line when:

(i) local conditions prevent a lateral separation of ten feet;

(ii) the water main invert is at least 18 inches above the crown of the sewer; and

(iii) the water main is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.

(C) Both the water main and drain or sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, asbestos-cement pressure pipe, prestressed concrete pipe, or PVC pipe. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling

(2) By following water main guidelines for Vertical Separation which include the following:

(A) A water main shall be laid so that its invert is 18 inches above the crown of the drain or sewer whenever water mains cross storm sewers, sanitary sewers or sewer service connections.

(B) The vertical separation shall be maintained for that portion of the water main located within ten feet horizontally of any sewer or drain crossed.

(C) A length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer or drain.

(D) Both the water main and sewer shall be constructed of a slip-on or mechanical joint cast or ductile iron pipe, asbestos-cement pressure pipe, prestressed concrete pipe, or PVC pipe.

(E) If it is impossible to obtain the proper vertical separation as described in (2) above or the water main passes under a sewer or drain, the following must be met:

(i) A vertical separation of 18 inches between the invert of the sewer or drain and the crown of the water main shall be maintained where a water main crosses.

(ii) Support the sewer or drain lines to prevent settling and breaking the water main.

(iii) Construction shall extend on each side of the crossing until the normal distance from the water main to the sewer or drain line is at least ten feet.

(c) Water Service Lines:

(1) The horizontal and vertical separation between water service lines and all storm sewers, sanitary sewers, combined sewers or any drain or sewer service connection shall be the same as water main separation described in (b)(1) and (2) above.

(2) Water pipe described in (b) (1)(C) above shall be used for sewer service lines when minimum horizontal and vertical separation cannot be maintained.

(d) Sample Site Plan

(1) Public water systems must collect total coliform samples at sites which are representative of water throughout the distribution system according to a written sample siting plan approved by the commissioner. A current site plan is to be on file in the Drinking Water Branch, Office of Water Quality, and the system files.

(2) The general location of routine sample sites must be indicated on the map and the specific locations are to be identified using a three (3) digit identification number (001). Using the three (3) digit identification number, a corresponding list is to be completed which includes the address and phone number of each site. The number of sites is based on the population served by the water supply. Systems should choose sites with dedicated sampling taps or businesses with ready access. Dead end lines and outside spigots should be avoided. The plan, as submitted to the Drinking Water Branch, is reviewed for completeness by the field inspector.

(e) Dead Ends

(1) Dead ends shall be minimized by looping mains whenever possible. Where dead end mains occur, they shall terminate with a fire hydrant, if flow and pressure are sufficient, or with an approved flushing hydrant or blow-off for flushing purposes.

(f) Hydrants

(1) Hydrants shall be provided at each street intersection and at intermediate points between intersections as recommended by the insurance services office. Generally hydrant spacing may range from 350 to 600 feet depending on the area being served.

(2) Hydrant drains may not be connected to, or located within 8 feet of sanitary sewers or storm sewer inlets.

(g) Valves

(1) Valves shall be provided on water mains so that inconvenience or sanitary hazard to water users will be located at not more than 500 foot intervals in commercial districts and no more than one block or 800 foot intervals in other districts.

(2) Valves should be exercised at least once a year and critical valves should be inspected and exercised more often.

(h) Water Audits

(1) Each supplier of water shall perform routine water audits to ensure that leaks are discovered as soon as possible and replaced.

(i) back flow preventors

(1) Refer to 327 IAC 8-10

(j) Booster Stations

(1) Where the storage or primary pumping facilities cannot provide a minimum static pressure of 35 psi throughout the distribution system at ground level, it shall be necessary to create a boosted pressure zone to serve those portions of the system.

(2) Automatic control equipment shall be installed to prevent the pump from causing a vacuum and/or lowering water pressure in any part of the distribution to less than 20 psi as measured at a ground surface.

(k) Water Loading Stations

(1) There may be no back flow to the public water supply

(2) The piping arrangement shall prevent contaminants being transferred from a hauling vessel to others subsequently using the station.

(3) Hoses may not be contaminated by contact with the ground.